



## ARTICLE

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## Children's wellness: outdoor learning during Covid-19 in Canada

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### Abstract

Outdoor learning has been a topic of recent discussion due to the Covid-19 global pandemic, which led to the closure of many schools, daycares, and regular programming, and the negative repercussions that affect children. Here, we consider the changing practices related to outdoor learning and Indigenous land-based learning during the pandemic, and the implications for children's wellbeing, development and learning. Indigenous culture, relating to traditional learning and knowledge, and cultural connections to the land, is also considered to interrogate how outdoor, nature-based, and on the land experiences affect community wellness. This paper draws on interviews with the leaders of two forest schools, Cloudberry Forest School and ForestKids, and the creator of the 1000 Hours Outside Program. Common themes, such as 'nature as the teacher' (trust regulation), environmental stewardship, social cohesion, physical and mental well-being, and Indigenous' ways of knowing were identified across the interviews. This study reveals practical implications for teachers regarding the importance of access to nature based free play children's development, and the importance of land-based education for Indigenous children.

**Keywords:** early years, Indigenous culture, outdoor education, play-based learning, nature-based learning

## **Introduction**

In Canada, children's 'early years', most commonly referred to as the period from birth to age eight, are an important foundational period in which young children experience rapid growth in their development (McCain, Mustard and Shanker, 2007; McCain, Mustard and McCuaig, 2011). During these early years, children's development is both responsive and susceptible to a broad range of early experiences - both positive and negative. With the onset of the Covid-19 pandemic came great concerns about the negative impacts on children's well-being in general, as Canadians witnessed how the country's lockdown disrupted schooling, and decreased children's physical and mental health. As schools, daycare centres, and programs shut down, children were now at home all day, and depending on their location and age, were either being homeschooled or learning online. Outdoor play became a refuge for some families who were adjusting to the new normal and looking for ways that their children could safely be active. According to a national survey by ParticipACTION conducted in April of 2020, a month after the World Health Organization declared the virus a global pandemic, "less than 3% of Canadian 5-17 year-olds were meeting the minimum recommendations in the Canadian 24-Hour Movement Guidelines for physical activity, sedentary behaviour, and sleep – in contrast to 15% before the health crisis" (De Lannoy, 2020, para.1).

The results of this survey confirmed the worries of parents and educators about the new realities for children living through the pandemic. Added to this concern, was the role of a child's geographical neighbourhood playing a key factor in the health of Canadian children. Canadian researcher Professor Sarah Moore's observations of a child's living situation during the pandemic explained that "living in an apartment was a potential deterrent to being outside... living in a single dwelling home that had a backyard meant you were more likely to be outside, and certainly there are these huge disadvantages based on neighbourhood and also socioeconomic status that has influenced the behaviours of these kids" (D'Entremont, 2020, para.20). Although in Canada many efforts were made for pre-schools to remain open to support the health of young children during this time, many families did not have the transportation nor the financial means to keep their children in regular programming.

This article considers the importance of being outdoors, and in nature on the land, and how the pandemic brought forth periods of closure for schools, day cares, and particularly outdoor programs, such as forest preschools, leaving children isolated at home. Canadians witnessed the closing of playgrounds and most recreational activities discontinued in Canadian provinces. We consider how a global pandemic challenged attitudes of parents and carers to rethink how the benefits of outdoor play championed over children's forced screen time due to remote school lessons, and how it created cause for greater understanding around the benefits of outdoor and nature play. As young children's lives continue to be disrupted by the pandemic, a rethinking has emerged on how children experience learning through play and their environment. We frame our article around considerations of how the Covid-19 pandemic impacted children's time in nature, on the land and in other outdoor spaces. We also consider how Indigenous communities are benefiting from children spending more time on the land during the global pandemic, and how this relates to community wellness. We draw from interviews with two Canadian Forest School Directors, and the creator of the global programme '1000 Hours Outside'.

Additionally, we share statistics based on the 1000 Hours program given by a Forest school in Eastern Canada and media sources related to Canada's positioning on nature play.

## Global Pandemic Impact on Children

In 2015, UN Member States adopted 17 Sustainable Development Goals (SDG) that seek to highlight issues of poverty, environmental, and universal human rights (Figure 1). The Sustainable Development Goals were projected to be achieved by the 2030 UN Summit. UN world leaders met in September 2019 to issue an agenda for a Decade of Action to help member nations achieve these goals, on the global, local, and individual levels. Particularly relevant to the context of the pandemic and schools worldwide is the mandate for "world leaders to redouble efforts to reach the people furthest behind, support local action and innovation, strengthen data systems and institutions, rebalance the relationship between people and nature, and unlock more financing for sustainable development" (United Nations, 2020). The SDG agenda seeks to balance human inequalities and address the climate emergency, by focusing on inclusivity and sustainability goals that are fundamental to global well-being.



Figure 1: The 17 Sustainable Development Goals of the UN 2015 summit (United Nations, 2020)

Several of the Sustainable Development Goals are addressed through land-based education and outdoor play: in particular, good health and well-being (3), quality education (4), and life on land (15).

## Theoretical Underpinnings

We begin by acknowledging the lands on which this research has taken place as the homelands of the Inuit and Mi'kmaq and we recognize the importance of Indigenous ways of knowing, doing, and being in promoting children's wellbeing. We also recognize that Indigenous Peoples have much to teach us about learning from and with the land. Dene educator and researcher, Chloe Dragon-Smith, (2020) explains: "When aligning with northern Indigenous worldviews, Land is at the center. What follows are the specifics of engaging with Land, and are led by the Land itself, by aligning with natural laws" (p.20). Forest school educators recognize that Indigenous ways of knowing and traditional land-based education existed long before the Forest and Nature School movement began but that much of the work

in forest schools has been led by non-Indigenous educators. The Child and Nature Alliance (2021) explains: “We want to repair our relationships with the Indigenous communities and people we have harmed, and, if they are willing, work towards co-creating trusting, safe, and reciprocal relationships with them.”

### **Land-Based Play (Outdoor and Nature)**

Outdoor and nature-based play is an important ingredient for optimal development of all children. The provision of enriching play experiences that support connection to the land, spirituality, and experiential learning promotes equity for all children. As such, we consider a variety of outdoor learning experiences in the theoretical underpinnings.

In Indigenous ways of knowing, land is central to learning. Land is “the receptacle where our knowledge and wisdom are obtained from and grounded in” (Bell and Brant as cited in Kaluraq, 2020, p.11). In writing about Inuit pedagogy, Tagalik (as cited in Rowan, 2017) explains there are two elements to the pedagogy: knowing and experiencing. “These dual elements are tukisiumaniq, which means building understanding or making meaning in life; and silatunig, which means experiencing the world” (p.402).

### **Perspectives on Play**

Play is the way that children make sense of their formative world (Piaget, 1962). Children’s play fulfils many different functions for children such as social engagement, symbolic expression, and motor activity. Canadian researcher Jane Hewes (2018) contends that play behaviours in children are “intrinsically motivated”, “controlled by the players”, “concerned with process rather than product”, “non-literal”, “free of externally imposed rules”, and “characterized by the active engagement of the players” (Hewes, 2018, p.2). Burke (2019) in her research on playground play observed three children playmaking an imaginary “dig to China” to attend the Olympic games. In her field notes in observing free play wrote, “Although the activity appears chaotic to the onlooker it shows how the children’s knowledge use and exploration of their playworld is not static; its constantly moving and changing as the children transform their knowing into something relevant and new” (p.22). Burke argues that in viewing play through a process orientation lens, educators are shifting their understanding of what it means to learn through the process of play and not focus on the final outcome or product created by children.

Despite the universality of agreement about the benefits of play, Gosso and Carvalho (2013) summarize the work of Gaskins, Haight and Lancy (2007) in highlighting some sociocultural differences observed:

“Different cultures value and react differently to play; play can be recognized by adults as having important consequences for cognitive, social, and emotional development, and adults can engage as playmates; play can be seen as a spontaneous activity of children, which adults do not structure or participate in; or else play can be seen as a spontaneous activity, but the amount of play is limited because other activities are considered more important” (p.22)

In consideration of how play is perceived from different perspectives, it is also necessary to consider the factors that affect children’s play lives. For example, in urban societies busy families often have less time and opportunity for children to engage in unstructured or free play. Free play for children is

unstructured play - play that is child initiated and imaginative in exploration (Burke, 2019). Over the last decade the introduction of technology that is geared towards promoting early learning is impacting children's time spent in other types of play activities. Opportunity for outdoor and nature-based play is lessened with the advent of a variety of screen time/electronic activities and games (e.g. television, computers, mobile devices and applications). Some scholars and others argue that the benefits of tablet technology and apps may be beneficial for every young child (Edwards, Mantilla et al., 2018). Others claim that technology has its place and when combined with play may be beneficial for learning certain types of cognitive skills (Marsh et al, 2015; Pyle and Danniels, 2017). A balanced approach to using technology is considered ideal to ensure a non-sedentary lifestyle, and free play as opposed to structured play offers increased health benefits, as well as opportunities for imaginative/creative play, problem solving, and social/peer interaction (Edwards et al, 2018; Forest School Canada, 2014; Pyle and Danniels, 2017).

### **The Canadian Forest School Picture**

Some exemplary outdoor and nature-based programs exist in Canada. For example, Forest School Canada (Forest School Canada, 2014), now an independent non-profit organization, was initially formed, in 2012, as "an educational initiative of the Child and Nature Alliance of Canada" (p.10). Forest School Canada's guide entitled *Forest and Nature School in Canada: A Head, Heart, Hands Approach to Outdoor Learning* (2014), provides educators information about Forest and Nature School (FNS)'s educational approach and program delivery. The program "has existed since the late 1950s with thousands of programs expanding the world over... and is called by many different names (e.g. Nature Kindergarten, Outdoor School, Waldkindergarten, Rain or Shine School, Bush School)" (Forest School Canada, p.12). The program, distinguished from other outdoor and environmental programs, can be implemented on a part-time or full-time basis and can be implemented in a variety of "contexts, environments, with varying age groups, and in different climates" (Forest School Canada, p.12). Despite variations in implementation between and across implementing countries, as outlined in the guide, based on the work of MacEachren (2013), all FNS programs require: "regular and repeated access to the same natural space, as well as emergent, experiential, inquiry-based, play-based learning" (Forest School Canada, 2014, p.12). Furthermore, while activities and the approach - free play vs. guided play, either individually or in varying size groups of students - may vary across FNS programs, an additional defining feature is that "children are provided with opportunities to build an ongoing relationship with the land...through this educational approach (Forest School Canada, p.12). FNS covers all disciplines and subject areas (e.g. science, math, physical education, literature and art). "Skilled educators in FNS... will know what curriculum standards they need to meet on any given day. The learning outcomes are based on real-time explorations and experiences, rather than predetermined concepts in books or on screens, done within the four walls of the classroom" (Forest School Canada, p.13).

Multiple benefits of outdoor, or nature play have been cited (Forest School Canada, 2014; Gosso and Carvalho, 2013). Some noted benefits of outdoor or nature play, also found in FNS, as noted by O'Brien and Murray (2007) and discussed in Forest School Canada (2014) include: improved social skills, confidence, communication, concentration, and motivation; improved gross and fine motor skills, and

stamina; increased nature visiting with families; and increased environmental knowledge. Atchley, Strayer, and Atchley (2012) cite increased higher level cognitive skills. Other potential benefits are “environmentally sustainable behaviours and ecological literacy... healthy and safe risk taking...improved academic achievement and self-regulation...improved creativity and resilience...” (Forest School Canada, 2014, p.16).

Despite the benefits, there is a trend towards “indoor-ification” (Forest School Canada, 2014, p.5) in which children have less and less access to free play, as well as outdoor play and its resulting benefits (American Academy of Paediatrics, 2009). Research through the Children and Nature Network (2012) has shown that youth participation in outdoor activities have declined in recent years, with children having 30 minutes or less of unstructured outdoor play daily and/or more than seven hours daily of sedentary activity through screen time activities (National Wildlife Federation, 2014). This has impacted, either directly or indirectly depending on the research, the occurrence of childhood obesity rates and childhood mental health problems (Muñoz, 2009).

In reality, all types of play can equally occur inside as well as outdoors; children can engage in play (i.e. free play) and play based learning (a continuum) across multiple settings, either on their own or with others in small or large groups; or under the care, supervision, participation, guidance, and/or direction of responsive adults as play participants or facilitators and extenders of play across a variety of settings.

## **Context and Setting of our Discussions**

Over the course of the pandemic, Public Health officials in Newfoundland, Canada have been encouraging outdoor activities as much as possible to help reduce the spread of Covid-19, which is less likely to be transmitted outdoors (VOCM, 2020; Haire, 2020). The provincial Newfoundland and Labrador school board has encouraged outdoor education (NLESD, 2020). In Newfoundland, new outdoor classrooms have been created during the pandemic (Haire, 2020). Laura Molyneux, the Executive Director of Cloudberry has provided outdoor classroom pedagogical expertise to schools on the Newfoundland Avalon peninsula through the ADVOST project. The ADVOST project considers innovative ways to enhance educator’s knowledge of multiple storytelling pedagogies, including land-based learning for the purpose of advancing children’s voice and agency. These workshops were developed to empower teachers to overcome perceived and real barriers to outdoor play and education. Laura and Anne have been co-researching for two years around outdoor play and nature-based learning. Much of their work has been to reconceptualize how the learning in the outdoor classrooms can assist teachers in understanding how to deliver everyday school curriculum with nature as their teacher. Their research together has broadened in the past year, as pandemic responses directly encouraged outdoor program offerings. The needs of educators are shifting more widely as the perception of outdoor/play based education is requiring less “buy in”. There appears to be more support in removing the barriers we have seen in the past to outdoor play, such as inclement weather, inadequate clothing, and stringent risk and safety precautions. Instead educators have proven more receptive to a positive focus on the principles and pedagogy of outdoor play, such as how play can meet learning outcomes and curriculum outcomes.

When children spend time outside, they learn about themselves and the world around them, developing a sense of themselves in relationship to the natural world. The concept of self-in-relation is a tenant of Indigenous ontology (Graveline,1998) and carries with it the responsibility of being in good relations with all beings in the ecosystem (Wilson, 2008). In Figure 2, this Cloudberry Forest school student has directed her own learning through making connections to the land - looking at a snail through a magnifying glass creates a deeper sense of environmental stewardship and a moment of reflection of our own role as humans on the planet.

Terri Kottwitz is the Director of ForestKids Early Learning near Halifax, Canada. For over 30 years, she has observed the ways in children develop this sense of self. Terri and Sylvia have co-researched together for two years considering how time in nature informs children's self-concepts or, more precisely, how forest schools contribute to children's environmental identity or their relationship to the natural world (Green, 2018).

Another collaborator is Ginny Yurick, the creator of 1000 Hours Outside, a program that has spread across the globe. As a mom who homeschools her children, she is a strong advocate of having her children learn with nature as a teacher. The 1000 Hours Outside programme has become an answer for families, to absorb that childhood energy, and provide for the hands-on experiences that children needed during this past year, as a result of the pandemic.



Figure 2: Child looking at snail Cloudberry Forest School (Cloudberry Forest School, 2020)

This study uses narrative inquiry, which Connelly and Clandinin (2006) describe as “the study of experience as story,” and that it “is first and foremost a way of thinking about experience” (p.477). “Story,” writes Tewa scholar Gregory Cajete (1994) “in creative combination with encounters, experiences, image making, ritual, play, imagination, dream, and modeling – forms the basic foundation of all human learning and teaching” (p.68). As a research tool, narrative allows for multiple voices (Moore, 2017) and provides an opportunity for participants to be co-researchers (Moore, 2017) engaging in collaborative storying (Bishop, 1999). There is an “inseparable relationship between story and knowing,” asserts Indigenous scholar Margaret Kovach (2009a, p.94).

We bring our stories, as educators who have a range of experiences both inside and outside of classrooms. Clandinin, Murphy et al. (2010) refer to narrative inquiry as a “relational research methodology.” As researchers and co-authors, we acknowledge our relationships with one another, with nature, and with the children and families with whom we have learned. The research data was

compiled from our conversations (Kovach, 2009b), reflections of teaching with nature, photographs, blogs, and social media postings. These are the basis of our “narrative tellings” (Connelly and Clandinin, 1990) in response to the following:

1. How has the Covid-19 pandemic impacted children’s time in nature/on the land/ outdoors?
2. How have forest schools continued to support children and their families during Covid-19?
3. How can/has Indigenous culture benefit from children spending time on the land during Covid-19 and how does this relate to community wellness?

We share our stories of outdoor nature and forest programs because, in the telling and retelling of narratives, we learn from one another’s lived experiences (Clandinin and Connelly, 1998) and understand more about the impact of Covid-19 on the smallest of society’s members – our children.

## **Sharing our Narratives**

### **Cloudberry Forest School**

Within the past two school years, Anne began working with Laura to assist primary/elementary teachers with professional learning opportunities that support play and learning in outdoor, natural, community spaces that exist outside of the typical school playground. As Executive Director of Cloudberry Forest school, Laura is also a Certified Forest School Practitioner, and a Lead Facilitator with the Child and Nature Alliance of Canada. In her role at Cloudberry, Laura is currently project lead for an initiative to demonstrate Cloudberry Forest School as a “learning lab” in which Provincial Government child-care licensing inspectors will participate as observers to explore and inform the potential for Forest and Nature Schools to be licensed in Newfoundland and Labrador.

The advent of Covid-19 re-introduced the importance of outdoor play for Canadian children’s physical and mental health. But more importantly, it also showed how a global pandemic revealed many systemic barriers to outdoor play. Laura shared that in spite of systemic barriers nature offers a significant healing power for many children. Many Canadian news affiliations reported scientific observations that outdoor play interactions are the safest due to transmission rates of Covid-19 being lower than indoor environments due to the dilution of respiratory drops in fresh air and the better ventilation of the outdoor environment. Building community relationships are an important part of outdoor learning – from co-creating group norms to keep each other safe to seeing the value in different learning styles while working on a group project. Children could safely socialize and nurture relationships with each other within their school communities. Additionally, Laura shared when selecting Figure 3, pictured below, that “outdoor environments also lend themselves to more natural social distancing and have fewer shared surfaces. This is strengthening the nature school movement, as more programs and educators are encouraging and supporting outside play”.



Figure 3: Children daily hiking Cloudberry Forest School (Cloudberry Forest School, 2020)

The excessive use of technology for remote schooling of children also became a concern in Canada. The pandemic meant that many children's only connection to others was through technology, and, as a result, Cloudberry's outdoor play-based curriculum with a complimentary social media delivery was welcoming to parents. In an interview, a new Cloudberry Forest school parent spoke about her child's feelings of isolation brought about by the pandemic. She admitted her young child's tablet had become "a teacher, a way to meet friends, and an entertainer". Cloudberry's use of technology was a supportive resource for parents.

With playgrounds and schools closed in Newfoundland during the lockdown, Laura was able to support parents in addressing these growing waves of anxiety through her daily posts of picture book read-alouds and physical challenges to get families outside. Using social media allowed Cloudberry educators and families to remain connected. These posts also used a popular Cloudberry character, a puppet "Mo" and other Cloudberry characters to help the children feel connected. Much like Sesame Street™ Mo was used to share concepts of big feelings such as frustrations, anxiety, fear, and boredom. Cloudberry pre-school educators also shared parenting resources and child development information, including trauma resources through public and private Facebook groups, in addition to the group's main Facebook page. These posts encouraged families to "remain in their bubble" while still feeling connected to the staff, the site and the class cohorts. The preschool educators even hosted Zoom calls for the annual parent-educator meetups. Laura created a blog "Power In Play" to support parents with their children's feelings and supporting co-regulation.

### **Land-based learning in Indigenous communities and Schools**

The impact of the global pandemic on children was apparent to Inuk teacher Ola Andersen (Spring 2021) who teaches in Cartwright, Labrador. School closures meant that students could spend time on the land learning skills such as making fires and gathering food by hunting and fishing. The pandemic

social distancing health regulations required that children spent time only with their immediate family members, thus strengthening those important relationships. Learning on the land carries over to learning inside through preparation and preservation of food that was gathered. Andersen refers to land-based learning as “a way of living” that promotes mental health, the development of life skills important to place, and relationships building. Such learning connects or reconnects Indigenous children to their cultural lands, languages, communities, and identities.

Breanne Card, an outdoor education/kindergarten specialist and Certified Forest School Practitioner, lives in Iqaluit, Nunavut. She and Inuk educator Maggie Kuniliusie co-founded the in-school program, Nuna School (land-based learning and cultural curriculum) at Nanook School in Apex, Nunavut. The pandemic closed Nanook school from March until June, 2020. However, Breanne and Maggie, noticed that their students were still heading outside to their favourite Nuna School play-scapes in a socially distanced fashion to remain connected with each other and with Nuna, the land, as their teacher. Breanne shared in our interview through email, that their early observations during the pandemic showed the importance of how place-based and land-based programs can support and nourish a strong sense of self, place, and community. Further, it confirms the families’ emotional attachment to the land as a place for self-regulation, comfort, and safety. Similar to Ola’s observations on the benefits of land-based and place-based learning, Nuna School continues to provide safe and positive spaces for Inuit children and families.

Cloudberry embraces the understanding that land is a co-teacher in the child’s learning. In particular, Cloudberry endorses the statement by the Child and Nature Alliance of Canada (2021) that the Alliance and Forest School Canada “have imposed a settler colonial way of being with the Land because our programs were not co-created with Indigenous people...We want to repair our relationships with the Indigenous communities and people we have harmed, and, if they are willing, work towards co-creating trusting, safe, and reciprocal relationships with them.” As much as possible, Laura includes knowledge keepers and community knowledge into her programming. She talked about her growing relationship at Cloudberry Forest school with the Indigenous community and welcoming Elders to the program. The Elders shared their knowledge of spruce root sourcing for a project with First Light Friendship Centre and they also offered ideas for the development of a sacred medicine garden.

Similar connections with Indigenous communities take place at the ForestKids Early Learning Centre described in our next example. At this Centre, Indigenous community members have taught children Indigenous dance, taught them about plant medicines, and shared Indigenous stories.

### **ForestKids Early Learning**

Terri Kottwitz is the Director of ForestKids Early Learning near Halifax, Canada. She is a Cedarsong-certified Forest Kindergarten Teacher, and her forest school is now a Cedar Song international site. She is also a fully-certified Forest and Nature School Practitioner with The Child and Nature Alliance of Canada. Terri explains that the parents who bring their children to the program want the children to be learning and developing in nature. In 2019, 17 of 19 families whose children could enter a pre-kindergarten public schooling programme, chose instead to pay private fees at the ForestKids Early

Learning Centre rather than have their children attend the public schooling system because they wanted their children to continue to learn in the forest school environment.

Before the global pandemic, the ForestKids program was participating in challenge to reach a 1000 hours of movement outside. However, in the spring of 2020, childcare centres in Nova Scotia were closed for over three months due to the pandemic. After the closure of ForestKids Centre, parents voluntarily tracked the number of hours their children were outside each day. In doing so, they continued the work that they valued the Centre doing - ensuring their children were playing and developing outside while also acquiring the knowledge and skills that such experiences give them. Several parents noted their appreciation of the 1000 Hours Outside programme as a motivator to get the entire family outside, and commented that their children were more conditioned to being outside for extended periods than the parents were themselves.

Parents reported the number of hours their children spent outside and often included the participation activities of the children. For example, children helped parents with tasks such as assembling a swing set, making bird feeders, building a sandbox, or cleaning the yard. Families reported that they interacted with nature through observing wildlife and fishing; gardened and planted trees; explored by examining plants and looking for signs of spring; engaged in physical exercise in the form of biking, walking in the woods, canoeing, and doing yoga; and played, which included jumping in puddles, swinging, throwing balls, digging in dirt, and building snowmen.

During the pandemic closure, a ForestKids staff member gave parents periodic updates on the cumulative number of hours outside that families had achieved. She also shared ideas about what parents could do with their children outside. "When I was outside today, I heard birds chirping, dogs barking and squirrels chatting. Ask the children if they hear anything when they are outside." Or, "Can you find some new greenery that has just started to grow?"

The Centre accumulated a total of 3847 hours outside during 2020, which reflects both family-reported hours as well as the hours for various groups of children at the Centre. Terri reported that although participation in the programme varied, it was encouraging to see the weekly totals increase, and to know that children were also getting outdoor time during the weekends. It is noteworthy that parents reported 201.5 hours for the Easter holiday weekend alone which showed families' renewed connections with nature.

### **1000 Hours Outside**

Anne had been following Ginny Yurick's blog posts for the past year and reached out to Ginny, the founder of the 1000 Hours Outside concept to discuss the programme. As suggested by the name, 1000 Hours Outside, encourages families to get their children outdoors for 1000 hours a year, nearly 3 hours a day, and track their progress throughout the year. The list of suggested counted hours for activities range from daily nature play to walks to summer camping trips. The popularity of this program has spread across the globe with an estimated 1 million children having taken part in the programme to date, and has been featured in well-known publications such as the New York Times. The idea for the programme came from Ginny's own experiences as a mother of five, with having her children

participating in different types of scheduled extra-curricular, adult-led programming, which had become draining for the whole family. A trained teacher herself, Ginny shares similar philosophies with writer Charlotte Mason, who believes that children should be outside 4-6 hours a day from April to October as long as the weather is tolerable. While spending outdoor time with another homeschooling family, both families quickly noticed positive changes in their children's increased coordination, and regulation of emotions. While 1000 hours a year may seem like a lot, if you compare it with the number of hours an average American child spends watching television - 1200 hours a year - it seems feasible to replace that passive screen time with outdoor time which is well-known to be so much more developmentally beneficial. Ginny says of the program, "about balancing nature time with screen time, and filling childhood and life with hands-on moments". Allowing children to experience free play outdoors shifts the focus away from adult led education, and towards the land and the child as teachers. Previous to this excerpt of our interview, Ginny discusses how nature has created an interest for each of her children from butterflies to plants.

Anne: Do you think nature is a teacher?

Ginny: Oh, I absolutely do, and I think the child is a teacher. I think they're their own teacher. One of the things that I have learned when I was directing everything, you know, when my kids were really little, and that's what these programs were, they were adult directed programs. When I took a step back, when I think about a child who learns how to crawl, or learn how to walk, I mean no one is instructing them. It's a miracle. You know, they learn how to talk. So, you encourage, and you make it safe, and you put them in the right environment, and try to help, provide them experiences, and then that helps.

With recent concerns for children's physical and mental well-being during the global pandemic, the importance of getting children outside is more evident than ever. One local Newfoundland homeschool family reported that while they had resolved to try and get outside more prior to the pandemic, quarantine measures were the final push for them to begin the 1000 Hours Outside program. Tracking progress for the challenge has been pushing the family to get outside, even on colder days, when they normally would have stayed inside. The isolation and anxiety that resulted with limited activities and public playspaces for children necessitated getting outdoors to improve the family's mental health.

## **Discussion**

**Stories are important to our lives.** Over our conversations, and previous work together we noted some important commonalities that emerged around our experiences. We read and shared our stories with each other to ensure that our retellings were accurate and have represented our contextual experiences below.

### **Forest/Nature as the teacher (trust regulation)**

The forest offers constant learning opportunities, where regular and repeated access to the same outside space teaches hundreds of environmental sciences concepts. Laura from Cloudberry Forest school shared:

“The children and I have found animal tracks which lead to conversation on habitats, hibernation, life cycles etc. We've watched ice melt and freeze in the river. As we spend multiple years on the site the children create different play scripts based on the time of year and begin to look forward to certain seasonal experiences such as animal tracking, maple tapping, the puddles in the spring and fall, ‘summer base camp’ and mucky river, sliding in the meadow or campfire days”

In this example, we see how the children develop trust and self-regulation in the space as they develop connections to certain areas, creatures or trees. We also noted that understanding the forest as your teacher creates a sense of pride, ownership, connection, security and comfort. The creation of story, ritual and the corresponding sense of connection supports children in self-regulation and reduces feelings of stress and anxiety.

When Anne asked Ginny if she viewed nature as a teacher, she shared:

“Nature is absolutely a teacher.... I thought ‘learning is in a desk, and it's with a pencil, with a worksheet, and a teacher, and a chalkboard’, but this sort of concept that movement is learning, and sets kids up to learn as well”

Additionally, Ginny shared how nature guides her children's learning and interests:

“For my own children, what I have noticed, when they hit that age around 7 or 8, which sort of goes in line with the Waldorf philosophy, they've all sort of developed their own specific nature interests and they've been different. So, I have one son who is interested in geology. I have a daughter who is interested in farming. I have another one that's interested in flower gardens. And so, what I have learned is that nature provides these multidisciplinary learning paths... Life is multidisciplinary, so learning and nature really reflects that, it's not so much in a box”

As with the example from Cloudberry, we see how nature, as the teacher, encourages children to use their natural curiosity and develop their individual interests and unique gifts. Such inquiry-based exploration can lead to multifaceted learning experiences that contribute to children's cognitive, physical, emotional and social development (MacEachren, 2013; Forest School Canada, 2014). Children's development and their learning are addressed by the UN's Sustainable Development Goals of good health and well-being, as well as quality education (United Nations, 2020).

### **Environmental Stewardship**

Children's connection to freedom, space and comfort of the predictability of the forest became more evident during Covid-19. In our data, all the outdoor educators spoke about how nature is always dependable, ever changing in learning experiences, but also a safe space that cradles the child and learning. Laura and Ginny both shared that Covid-19 shifted the focus of the values of outdoor play and the growth and knowledge being directly attributed to environmental stewardship. At one point in our discussions, Laura shared:

“As people spend more time outside they will inevitably see the outdoors as being critical and thus important to preserve. One example I can think of is this summer when the children were catching moths. After 13 weeks on their screens at home it was truly magical to watch them catch, collect and support these small creatures. While moth catching is a pretty traditional summer camp experience at Cloudberry there was something extra special about watching it happen this year. It

reminded me that children are resilient and that they truly want to develop connection with the space and creatures within it - and how important it is to provide these experiences to all children.”

Ginny shared about the loss of environmental stewardship in the growing technological world:

“I think it’s easy to lose something that you’re not taking part in, right. So to steward the environment, but you’re only spending 4 to 7 minutes outside a day on average, you’re removed. You’re far removed from what you’re supposed to be stewarding. So I think that when we fall in love with our Earth, then we’re going to be less likely to litter it, we’re going to be more apt to join in on these initiatives that help preserve the beauty, and our surroundings.”

Part of the Sustainable Development Goals as outlined by the UN are designed to address environmental issues. Land based education addresses the SDG goal “Life on Land” (United Nations, 2020) by allowing children to form deep connections with the land that they explore. Forming attachments with the land allows children to feel a greater sense of obligation to protecting and advocating for the land. Through outdoor learning, children are also able to learn how the natural world works and gain skills to help them protect the land, such as learning to respect local wildlife, and clean up litter. Nature based learning can nurture environmental stewardship and help to spur on conversations about how to live sustainably, learning such skills as recycling, composting, or growing organic food.

### **Social Cohesion**

One consistent theme was community social cohesion in embracing outdoor and nature play. The movement for outdoor education is now promoted by a wider variety of stakeholders including but not limited to, governments, recreation experts, health officials and mental health advocates. During the 2020 summer season, Public Health recommendations in Canada allowed programs such as Cloudberry to offer summer camp that was relatively “normal” or typical of their existing programming with minor adjustments.

In her interview Ginny shared that 1000 Hours Outdoors has grown in popularity since the beginning of the pandemic, as a result of cancellation of child activities and school closures. Families are seeing the close correlation of outdoor play to the healthy development of their children’s physical and mental health. The outgrowth of this program does reflect a change in the uptake of outdoor play. Ginny indicated that communications from parents through email has been representative of families from varied socio-economic means. The low cost barriers of the program are refreshing. All co-authors shared feedback from parents indicating a new relationship with outdoor learning, and hence a growth in programming. Home school families saw a new respect on the part of other parent groups , acknowledging how outdoor learning when given time, could afford diverse choices in learning opportunities for all members of a family.

The Canadian Parks Council (2014) notes: “Playing in nature nurtures the development of empathy and self-awareness, removes the social hierarchy among children, and reduces instances of bullying” (p. 20). Outdoor play-based learning connects children who may not tend to gravitate towards each other due to shared interests. Through outdoor play, children recognize the skills and learning styles of their

peers, when it comes to group projects like fort building. School community is further developed through the shared values of promoting outside play, but also in the need for community events such as outdoor clothing exchanges, parent shared resource tips for rinsing off outdoor clothing after a particularly muddy day or simply observing their children play. With fostering a sense of community through outdoor learning, educators can further contribute to the health and wellness of children and the quality of their education, both of which are goals of the SDG (United Nations, 2020).

### **Physical and Mental Well- Being**

Prior to the Pandemic there was a greater recognition of the importance of Mental health and how that impacts one's physical health. Canadian Reports showed evidence of rising anxieties for children's mental health as a result of the pandemic. Teacher Ola Andersen notes how outside play boosted children's mental health. She suggested, in particular, that sitting by an open fire outside and contemplating can be good for mental health. The benefits of being outside on mental and physical health are well established (Canadian Parks Council, 2014).

All educators recognized the importance of physical movement to learning. The freedom of movement brings children who are more focused, regulated at home and in formal learning settings. Laura noted that after thirteen weeks of lockdown, children had little energy for large motor games, hikes or running, However, with the extended summer of 9 weeks their physical capacities became stronger. Laura further stressed the importance of the need to feel safe:

"We often hear from families that children feel safe in our program, and to us that is critical to children's mental well-being. We have one child who now attends our kindergarten supplement program who has been attending since his 3rd birthday. He has a calendar by his bed and every night he goes to bed asking..."Is it Monday yet?" To me that indicates the power of offering safe, child-led, child respecting programs and meeting the needs of all children"

Ginny shared how her family was struggling before they began outdoor learning as a family:

"My kids were young, and I was doing programs. I didn't really know what else to do, and the programs were great, but were really draining for all of us, I think because it's forced, because it's maybe not what the child wants to be doing"

After beginning to get her children outdoors for multiple hours a day, she shared "within a few short weeks, I noticed that my children were thriving". As schools continue to offer more schooling through remote means, media reports over the mental health of children and youth continue to raise public attention. Movements, such as 1000 Hours Outside, have come to the forefront as a way to address the global rising mental health issues of children.

### **Implications and Conclusions**

Our paper considers the importance of play in children's lives and how the impact of the global Covid19 has brought forth unexpected changes in the lives of children. Many aspects of children's socio-emotional, cognitive, communication, and physical development are supported by varied opportunities to play beginning at birth (McCain, Mustard and McCuaig, 2011; Smith, 2013). The global Covid19

outbreak has strengthened general understanding of how outdoor and nature-based play are an important ingredient for the optimal development of all children.

The value of outdoor play has become more evident over the 2019-2021 academic years as a result of the pandemic. And as the research continues to evolve, it is critical that educators continue to advocate for outdoor, child-led, emergent learning processes. In a post-pandemic academic learning environment the self-regulatory, sensory, emotional, and physical learning that occurs outside will be essential for the return of children's optimal physical, mental, and emotional health, much of which that has been taxed from increased periods of sedentary behaviour, screen time exposure and social distancing protocols. Our work together shares that schools should prioritize experiences that promote resiliency, emotional safety, and community, which should include time outdoors for play, nature exploration, self-reflection and self-directed learning.

There is a need for teachers to construct deeper understandings around nature based play. Teaching can be a shared pursuit, with nature as a teacher in collaboration with the curiosity and learning desires of the child. As a shared pursuit, "nature brings forth problems to solve and questions to ask" (Burke, 2019 p.108), and as such the child is the expert as well as the learner. Anne's and Laura's work with teachers, Ginny's inspiring 1000 Hours Outside, and Terri's work understanding the outdoors as a vital classroom for children's development, all contribute to our understanding of the importance of nature based play for children. Nature is a seamless curriculum that nurtures children's understanding of the self in relation to all life, invites multidisciplinary connections in their learning, and fosters environmental stewardship.

Land-based education that is led by Indigenous educators and knowledge holders, such as the Nuna School in Iqaluit and land-based learning described by Inuk educator Ola Andersen, is also important for the cultural learning and wellbeing of Indigenous children. Akittiq (as cited in Kaviq, 2020), reminds parents: "If we are going to carry on Inuit culture, we need to include our children and demonstrate our relationship to the land in healthy, practical, engaging, and holistic ways so that they become a part of their *iliqqusiq* [or pattern of behaviour]" (p.17). Land-based learning is also important to non-Indigenous children as it promotes a respect for Indigenous ways of knowing. Dragon-Smith (2020) describes land as "an equalizer between all peoples; a safe place for cultural exchange and understanding" (p.12).

The type of disruption that Covid19 has brought to children's natural play environments is cause for concern and calls for children to be provided with culturally attuned, ethically sound, inclusive early playful learning opportunities, and, as required, early interventions to enhance opportunities for them to reach their fullest potential. Sarah Moore calls play:

"a refuge for children, so when children are experiencing stress, when children are experiencing trauma, playing is this place of imagination where they can escape those other skills" (D'Entremont, 2020, para.23)

This message is echoed by Louise de Lannoy, of the CHEO Research Institute and project manager at Outdoor Play Canada, who says that "when children are outdoors and when they're playing, it gives them a sense of agency, a sense of control" and that it helps them to "process their own emotional

responses to adversity” (Johnstone, 2020, para.11). Thus, in the time of a global pandemic, children’s nature-based play becomes more important than ever.

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